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Study on AAA Platforms For Scientific Resources in Europe

In December 2011, a consortium of four partners and a number of external experts was awarded a contract by the European Commission to carry out a study into AAA (authentication, authorisation and accounting) platforms and services for scientific resources. The study, led by [TERENA](#), was concluded in September 2012.

The [AAA Study Final Report](#) is now available as pdf.

Consortium	Experts
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Aim of the AAA Study

The **goal of the study** was to evaluate the feasibility of delivering an integrated Authentication and Authorisation (and possibly accounting) Infrastructure (AAI) to help the emergence of a robust platform (Scientific Data Infrastructure(SDI)) for access to and preservation of scientific information.

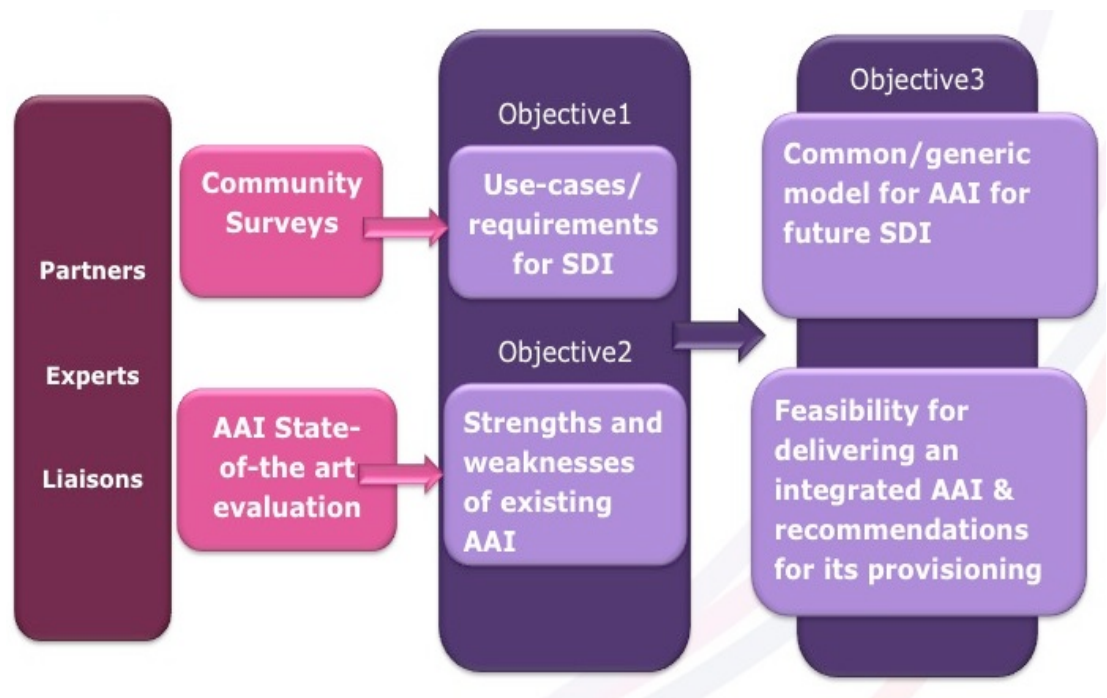
The targeted actors in the study were the research and education communities, information service providers (data centres, libraries) and e-Infrastructure providers.

The study was organised in two parts (see picture on the righthand side):

1. **Collection use-cases** to derive the AAI requirements;
2. **Evaluation of existing AAI** as well as their gap analysis to identify their strengths and their challenges. The legal aspects of the different AAIs was also assessed.

The output of the study consists of a set of recommendations for the delivery of an integrated AAI to be used for SDI.

The recommendations highlight the following priorities:



- The general assumption confirmed by this study is that an AAI for SDI should be built on standard technologies, using mechanisms to translate between various authentication and authorisation technologies, and that federated access plays an important role;
- To fully benefit from federated access, more funding is needed to improve the reach of national identity federations in research and education;
- Further research is needed to enhance authorisation and accounting mechanisms;
- A common policy and trust framework for identity management is needed, as well as clarity on data protection laws – these should be coordinated at European level;
- Relevant organisations such as eIRG, REFEDS (Research and Education Federations), IGTf, the EC and consortia of libraries and data centres should all work towards these goals.

[Read more on the Organisation of the Study...](#)

Results of the Study

The tables below summarises the list of high-priority recommendations as identified by the team.

Technical Recommendations	Action Required	Main Stakeholder(s)	Policy Recommendations
Rely on standards for federated technologies for network, service and application access across Europe .	Specific support should be given to inter-federation to meet cross-disciplinary and cross-boundary requirements and to create a common access infrastructure.	Developers, eduGAIN, EUDAT, EGI, REFEDS	Facilitate the development of a common policy and trust framework for identity management that researchers, libraries and data centres can benefit from.
Enhance existing AAIs to address the demands of research communities for accessing different types of services in a manageable and secure way.	<p>AAA support for mobile access;</p> <p>Support for non-Web browser applications;</p> <p>Develop security token translation services to enable inter-operability of different AAIs;</p> <p>Provide guest identity providers (IdPs) for users that cannot rely on an institutional IdP;</p> <p>Allow for effective resource usage accounting for distributed and heterogeneous environments;</p> <p>Enable the usage of persistent identifiers within AAIs;</p> <p>Support social network identities in combination with institutional identities to address specific use - cases for the SDI.</p>	National identity federations, eduGAIN, research collaborations (i.e. big scientific projects)	The operators of national identity federations to expand the coverage of their federations.
Enhance authorisation in inter-federations scenarios by providing support for distributed attribute management.	Provide security mechanisms and tools to enable identity federations to consume attributes managed by collaboration projects.	National identity federations, collaboration projects (e-Research)	Identity federations to harmonise their policies.
Phase-out IP-based authentication.	Provide support for those institutions relying on IP-based authentication to migrate to federated access technologies.	National identity federations, service providers, national funding bodies	Lower the adoption level of existing infrastructures for users and provide support communities to benefit from existing ones.

Legal Recommendations	Action Required	Main Stakeholders	Funding Recommendation
<p>Provide clarity about consent and legitimate interest.</p> <p>Art 7 of European Directive (95/46/EC) states that personal data can be processed if <i>“processing is necessary for the purposes of legitimate interests pursued by the controller or by the third party or parties to whom the data are disclosed, except where such interests are overridden by the interests for fundamental rights and freedoms of the data subject”</i></p>	<p>Provide clear and simple documentations and raise awareness on when consent can or cannot be used.</p>	<p>EC, Member States, eduGAIN/national identity federations</p>	<p>Secure funding to v towards inter-oper e-Infrastructures an enhance the corresponding AAls</p> <p>Secure sustainable structural funding to support various e-Infrastructures.</p> <p>Invest in ‘train-the-trainers’ initiatives.</p>
<p>Organise training for the Member States representatives to avoid cultural interpretations of the Directive and to prepare for a smooth transition from the Directive to the Regulation.</p>	<p>Raising awareness.</p>	<p>EC, Member States</p>	

The recommendations target different stakeholders:

- The EC for the definition of a possible directive;
- Developers to encourage them to use standard technologies to achieve interoperability;
- Member States for creating the conditions for such an infrastructure at a national level;
- Policy makers, particularly those involved in the Data Protection Directive, to create awareness of the impact of legislation on cross-boundary access management.

The involved stakeholders should act timely to address these points.

Milestones and Meetings

The study will be done in the period from January 2012 till August 2012 with the following deliverables and timetable.

Name	Deadline	Description
Draft Final Study Report	June 2012	<p>Draft AAA-Study-Report - To provide the draft final report of the study for comments.</p> <p>This version of the report was circulated before the final workshop (see below).</p> <p>Partners' liaisons (i.e. REFEDS, TF-EMC2 and other relevant groups) were also consulted.</p> <p>Beside the report, the consortium has made available an additional document 'FIM and Law'.</p> <p>This document covers legal issues in federated access management.</p>
Final Workshop	July 2012	<p>To present the preliminary results to the study and receive feedback during the workshop.</p> <p>The workshop was organised at the Commission's premises in Brussels.</p>
Final Study Report	Sep 2012	<p>To include the feedback received during the final workshop.</p>

Contacts

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